AMENDMENT TO THE CLAIMS:

1. (Cancelled)

2. (Previously presented) An X-ray image radiographing method of radiographing an object of a breast, comprising

a sharpness enhancing step of increasing a sharpness of an image lowered due to penumbra by enhancing an edge of the image with refraction contrast enhancement;

the sharpness enhancing step comprising steps of:

using an X-ray tube having a size D of focal spot defined by the following formula:

$$100\ \mu m \leq D \leq 600\ \mu m;$$

setting a distance R1 between the X-ray tube and an object of a breast so as to be within a range defined by the following formula:

$$(D\text{-}7)/200\ m \leq R1 \leq 5\ m;$$ and

setting a distance R2 between the object and an X-ray detector so as to be within a range defined by the following formula:

$$0.15\ m \leq R2 \leq 1.4\ m.$$

3-5. (Cancelled)

6. (Original) The X-ray image radiographing method of claim 2, wherein the energy of X-ray in a line spectrum is 10 keV to 60 keV.

7. (Original) The X-ray image radiographing method of claim 2, wherein an anode of the X-ray tube contains molybdenum or rhodium.

8. (Original) The X-ray image radiographing method of claim 2, wherein a screen/film system having an image contrast $\overline{G}$ of 1.5 to 3.6 is used.

9. (Original) The X-ray image radiographing method of claim 2, wherein a screen/film system having an image contrast $\overline{G}$ of 1.5 to 4.0 is used.

10. (Original) The X-ray image radiographing method of claim 2, wherein a digital X-ray detector having a size of a pixel of 1 μm to 200 μm is used.

11. (Original) The X-ray image radiographing method of claim 10, wherein an enhanced boundary portion of the object is detected from the obtained image data and a width of the boundary portion and/or image contrast is further enhanced.

12-25. (Cancelled)

26. (Previously Presented) The X-ray image radiographing method of claim 2, wherein the distance R1 satisfies the following formula:

$$0.7\,\text{m} \leq R1 \leq 5\,\text{m}.$$

27. (New) An X-ray image radiographing method of radiographing an object of a breast, comprising

a sharpness enhancing step of increasing a sharpness of an image lowered due to penumbra by enhancing an edge of the image with refraction contrast enhancement;

the sharpness enhancing step comprising steps of:

using an X-ray tube having a size D of focal spot defined by the following formula:

$$100\,\mu\text{m} \leq D \leq 600\,\mu\text{m};$$

setting a distance R1 between the X-ray tube and an object of a breast so as to be within a range defined by the following formula:

$$.46\,\text{m} \leq R1 \leq 5\,\text{m};\ \text{and}$$

setting a distance R2 between the object and an X-ray detector so as to be within a range defined by the following formula:

$$0.15\,\text{m} \leq R2 \leq 1.4\,\text{m}.$$

28. (New) The X-ray image radiographing method of claim 27, wherein the energy of X-ray in a line spectrum is 10 keV to 60 keV.

29. (New) The X-ray image radiographing method of claim 27, wherein an anode of the X-ray tube contains molybdenum or rhodium.

30. (New) The X-ray image radiographing method of claim 27, wherein a screen/film system having an image contrast $\overline{G}$ of 1.5 to 3.6 is used.

31. (New) The X-ray image radiographing method of claim 27, wherein a screen/film system having an image contrast $\bar{\sigma}$ of 1.5 to 4.0 is used.

32. (New) The X-ray image radiographing method of claim 27, wherein a digital X-ray detector having a size of a pixel of 1 μm to 200 μm is used.

33. (New) The X-ray image radiographing method of claim 32, wherein an enhanced boundary portion of the object is detected from the obtained image data and a width of the boundary portion and/or image contrast is further enhanced.

34. (New) The X-ray image radiographing method of claim 27, wherein the distance R1 satisfies the following formula:

$$0.7\,\text{m} \leq R1 \leq 5\,\text{m}.$$